

RETAINER BLOCK FOR USE WITH DISH RACK

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Inventors: Frank Yang, Adam C. Wade, Tzu-Hao Wei**BACKGROUND OF THE INVENTION**1. Field of the Invention

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The present invention relates to dish racks and their accessories, and in particular, to a retainer block that can be used with the dish rack to protect the user from sharp edges of a sharp object, such as the blade of knives.

2. Description of the Prior Art

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Dish racks are commonly used in dishwashers for organizing and positioning plates, bowls, cups and utensils for washing. Dish racks are also commonly used on kitchen countertops for positioning plates, bowls, cups and utensils to let them dry after they have been washed.

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Most of the plates, bowls, cups and utensils can be handled by a user without presenting any danger or harm because they do not have sharp or blunt surfaces. However, a potentially dangerous utensil is the knife, whose sharp blades can cut or hurt a user if the user accidentally grabs the knife by the blade. In conventional dish racks, a plastic collector tray is provided for receiving utensils. The collector tray is typically divided into different compartments for receiving different types of utensils (spoons, forks, knives, etc.). These compartments have open tops, so that the user merely inserts the utensil into the compartment. Knives are more troublesome. If the user inserts the knife into an open compartment with the blade facing down, the user can later remove the knife in a safe manner by gripping the handle of the knife. However, inserting the knife in this orientation may blunt the sharp tip or blade of the knife since the tip or blade will contact the walls of the compartment. On the other hand, if the user inserts the knife into an open compartment with the blade facing up, then the knife would pose a severe safety risk to anyone who accidentally attempts to grip the knife without seeing the exposed blade.

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Therefore, there still remains a need to provide a safe disposition for knives and sharp objects in a dish rack.

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SUMMARY OF THE DISCLOSURE

It is an object of the present invention to provide a safe disposition for knives and sharp objects in a dish rack.

5 It is another object of the present invention to provide a retainer block that can safely receive and retain a knife or other sharp object in a dish rack.

It is yet another object of the present invention to provide a multi-purpose retainer block that can also be used to receive other types of objects.

10 In order to accomplish the objects of the present invention, the present invention provides a dish rack having a collector tray, the collector tray having a compartment. A retaining block is seated in the compartment.

According to one embodiment of the present invention, the retaining block includes a raised shell having two side walls, an end wall extending between the side walls, and an angled top wall connected to the end wall and extending between the side walls, with the angled top wall having a base. A planar section extends from the base of the angled top wall, and a flange extends from the end wall. An interior space is defined by the side walls, the end wall and the angled top wall, and at least one elongated slot provided in the angled top wall. The sharp edge (e.g., blade) of a sharp object (e.g., knife) can be inserted through the slot and be shielded from the user by the raised shell.

20 According to another embodiment of the present invention, the retaining block includes a raised shell that has four side walls and a top wall extending between the side walls, a planar section extending from one of the side walls of raised shell, an interior space defined by the side walls and the top wall, and at least one elongated slot provided in the top wall.

25 According to yet another embodiment of the present invention, the retaining block is a retainer having a planar section that has opposing end edges, with each end edge seated over either a tray edge or a dividing wall. The retainer has at least one elongated slot provided in the planar section.

30 BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a dish rack and a retainer block according to one embodiment of the present invention shown with the retainer block positioned to receive knives and sharp objects.

FIG. 2 is a perspective view of the dish rack and retainer block of FIG. 1 with

the retainer block positioned to receive other objects.

FIG. 3 is a top perspective view of a retainer block according to one embodiment of the present invention.

FIG. 4 is an enlarged top perspective view of the retainer block of FIGS. 1 and 3 positioned in a collector tray to receive knives and sharp objects.

FIG. 5 is an enlarged top perspective view of the retainer block of FIGS. 1 and 3 positioned in a collector tray to receive other objects.

FIG. 6 is a top perspective view of a retainer block according to another embodiment of the present invention.

FIG. 7 is a top perspective view of a retainer block according to yet another embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The following detailed description is of the best presently contemplated modes of carrying out the invention. This description is not to be taken in a limiting sense, but is made merely for the purpose of illustrating general principles of embodiments of the invention. The scope of the invention is best defined by the appended claims.

FIGS. 1-5 illustrate one retainer block 10 according to the present invention. The retainer block 10 is adapted to be used with any conventional dish rack that has a collector tray. FIGS. 1-2 illustrate a dish rack 12 that has a novel design, but the retainer block 10 can be used with any conventional dish rack as well. The dish rack 12 can have the typical components of a conventional dish rack, including, but not limited to, a wire frame base 14 for receiving plates and large bowls, a divider section 16 that has a plurality of divider walls for receiving plates, extending holders 18 for holding drinking glasses or wine glasses, a wine glass or cup holder 20, and a collector tray 22 that is suspended along an end edge 24 of the dish rack 12. The collector tray 22 can be made from plastic, and typically has a plurality (e.g., three as shown in FIGS. 1-2) of open-top compartments 26 defined by dividing walls 28. As best shown in FIG. 1, the retainer block 10 according to the present invention is received inside one of these open-top compartments 26, and positioned at the top of the compartment 26.

The retainer block 10 is illustrated in greater detail in FIGS. 3-5. The retainer block 10 has a raised shell 52 and a planar section 50 extending from one end of the raised shell 52. The raised shell 52 has two side walls 54 and 56, a curved and

angled end wall 58 extending between, and connecting, the side walls 54, 56, and a curved and angled top wall 60 also extending between, and connecting, the side walls 54, 56. The planar section 50 extends from the base of the angled top wall 60.

A small flange 62 extends from the end wall 58, and a vertical edge 64 extends vertically downwardly from the flange 62. The walls 54, 56, 58 and 60 define an empty interior space 68 (see FIG. 5). A plurality of elongated slots 70 are provided in the top wall 60 and the end wall 58. These slots 70 are adapted to receive separate knives in the manner described below, and can be provided in different lengths to accomodate knives of different widths (see FIGS. 3-5). Similarly, a plurality of elongated slots 72 can also be provided on the planar section 50.

The retainer block 10 can be used in the following manner. Referring first to FIGS. 1 and 4, the retainer block 10 can be placed over any selected compartment 26 of the collector tray 22, with the flange 62 seated on top of an edge (e.g., 78) of the collector tray 22 and the planar section 50 seated on top of a dividing wall 28 with the raised shell 52 of the retainer block 10 extending upwardly. Alternatively, the retainer block 10 can be placed over any selected compartment 26 of the collector tray 22 with the planar section 50 seated on top of an edge (e.g., 78) of the collector tray 22 and the flange 62 seated on top of a dividing wall 28. As yet a further alternative, the retainer block 10 can be placed over any selected compartment 26 of the collector tray 22 with the planar section 50 and the flange 62 seated on top of adjacent dividing walls 28. The vertical edge 64 acts as a positioning member adjacent the edge 70 or a dividing wall 28. With the raised shell 52 extending upwardly, the user can insert the blade(s) of one or more knives through any selected slot 70 into the interior space 68 of the raised shell 52. Thus, the blades of the knives will be shielded by the raised shell 52, with only the handles of the knives extending outwardly from the raised shell 52. This positioning of the knives (i.e., shielding of the blades by the raised shell 52) will ensure that the user will not be able to grip or contact the blades of the knives when removing the knives from the dish rack 12. In addition, this positioning will minimize blunting of the blades. Although the retainer block 10 is illustrated herein as being for use with knives, it can also be used to accomodate any sharp objects.

The user can also insert shorter knives through the slots 72 so that the blades of the knives will be shielded by the planar section 50.

Referring next to FIGS. 2 and 5, the retainer block 10 can be placed over any

selected compartment 26 of the collector tray 22, with the flange 62 seated on top of an edge (e.g., 78) of the collector tray 22 and the planar section 50 seated on top of a dividing wall 28 with the raised shell 52 of the retainer block 10 extending inwardly into the compartment 26. Alternatively, the retainer block 10 can be placed over any selected compartment 26 of the collector tray 22 with the planar section 50 seated on top of an edge (e.g., 78) of the collector tray 22 and the flange 62 seated on top of a dividing wall 28. As yet a further alternative, the retainer block 10 can be placed over any selected compartment 26 of the collector tray 22 with the planar section 50 and the flange 62 seated on top of adjacent dividing walls 28. The end wall 58 acts as a positioning member adjacent the edge 70 or a dividing wall 28. With the raised shell 52 extending into the compartment 26, the interior space 68 will define a bowl-like container for receiving small washable items, such as baby bottle nipples, corn holders and similar items. The slots 70 in the walls 58 and 62 will prevent water from collecting inside the interior space, thereby allowing water to be drained therethrough.

Thus, the retainer block 10 according to the present invention is multi-functional in that it allows the user to use it for retaining sharp objects, and can be turned upside down to be used for retaining small items. The raised shell 52 of the retainer block 10 provides an effective shield against the sharp edges or blades of the knife or other object retained in the retainer block.

FIGS. 6 and 7 illustrate two other embodiments of retainer blocks that can be used in the present invention. Referring first to FIG. 6, the retainer block 10a is similar to the retainer block 10 in that it has a raised shell 52a. The raised shell 52a has four side walls 54a, 55a, 56a, 57a and a flat top wall 60a extending between, and connecting, the side walls 54a, 55a, 56a and 57a. The walls 54a, 55a, 56a, 57a and 60a define an empty interior space that is similar to the interior space 68. A planar section 50a extends from the side wall 55a of the raised shell 52a. A plurality of elongated slots 70a are provided in the top wall 60a. Similarly, a plurality of elongated slots 72a can also be provided on the planar section 50a. The retainer block 10a can be utilized in the same manner as the retainer block 10 as described above.

Referring now to FIG. 7, the retainer block 10b has a single planar section 50b. An interior space is defined under the planar section 50b. A plurality of elongated slots 72b are provided on the planar section 50a. The retainer block 10b

can be placed over any selected compartment 26 of the collector tray 22, with the opposing end edges 62b and 64b of the planar section 50b seated on top of an edge (e.g., 78) of the collector tray 22 and on top of a dividing wall 28. Alternatively, the retainer block 10b can be placed over any selected compartment 26 of the collector tray 22 with the opposing end edges 62b and 64b seated on top of adjacent dividing walls 28. The user can insert the blade(s) of one or more knives through any selected slot 72b, so that the blades of the knives will be shielded by the planar section 50b.

One difference between the retainer block 10b and the other retainer blocks 10, 10a is that the retainer block 10b cannot be inverted for use in holding smaller objects. On the other hand, both the retainer blocks 10 and 10a can be inverted to define bowl-like containers for receiving small washable items.

While the description above refers to particular embodiments of the present invention, it will be understood that many modifications may be made without departing from the spirit thereof. The accompanying claims are intended to cover such modifications as would fall within the true scope and spirit of the present invention.